

Health Consultation

Assessment of Soil Exposures in Communities
Adjacent to the Walter Coke, Inc. Site
(a/k/a 35th Avenue Coke Site)
Birmingham, AL

EPA FACILITY ID: ALN000410750

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Agency for Toxic Substances and Disease Registry
Division of Community Health Investigations
Atlanta, Georgia 30333

ATSDR Health Consultation: Community Soil Exposures, WCI Site, Birmingham, AL
Final Release

Summary

The Public Health Issues

The purpose of this public health consultation (PHC) is to determine if past, present, and future exposures to soils in Collegeville, Harriman Park, and Fairmont communities are a public health hazard for people who live or work in the area. The United States Environmental Protection Agency (EPA) Region IV requested that the Agency for Toxic Substances and Disease Registry (ATSDR) evaluate environmental data collected from three communities that surround the Walter Coke Inc. facility in North Birmingham, Jefferson County, Alabama. Residents in the three communities of Collegeville, Harriman Park, and Fairmont are concerned about contaminated soil in their neighborhood and the effect that exposure to contaminants in the soils may be having on their health.

Seventy-five properties within the nearby communities have been sampled for arsenic and polycyclic aromatic hydrocarbons. (A broad range of soil contaminants were measured and only arsenic and polycyclic aromatic hydrocarbons were detected above health screening values.) The polycyclic aromatic hydrocarbons (PAHs) were measured as benzo(a)pyrene toxic equivalents (BaP-TE). The BaP-TE concentration is the sum of 7 different PAHs with their concentrations adjusted for their toxicity relative to benzo(a)pyrene (BaP).

Past exposures are addressed by evaluation of the soil contamination data from two sampling events (2005 and 2009) conducted for Walter Coke, Inc. and the pathways by which people may be exposed to those soils. As a result of those sampling events, Walter Coke, Inc. has agreed to remediate offsite properties with arsenic levels above 37 mg/kg and/or BaP-TE levels above 1.5 mg/kg. Sixteen residential properties and two schools have already been remediated. Present and future exposures to soil are addressed by evaluating whether those cleanup levels are protective of public health.

In addition to the soil data evaluated in this health consultation, ATSDR is currently evaluating air monitoring data from the surrounding communities. Residents living adjacent to the WCI site may have exposures to site-related contaminants from breathing the contaminants that are released to the air. The pending Public Health Assessment of air monitoring data will include an evaluation of those contaminants that may be present in both air and soil.

Conclusions

ATSDR has evaluated the past, present, and potential future exposures to residential soils in the communities adjacent to the WCI site. On the basis of the

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likely exposure pathways and the available environmental data, ATSDR concludes the following:

Arsenic Soil exposures to arsenic in sampled properties around the Walter Coke, Inc. site do not present a public health hazard with the possible exception of a child with pica behavior eating a large amount of soil from the property with the highest arsenic concentration. In this case, the pica child could develop short term health effects such as pain, nausea, vomiting, and diarrhea. Three of the sampled properties had average arsenic concentrations above the proposed cleanup value. Adverse health effects are not expected from arsenic soil exposures at properties with average arsenic concentrations below the proposed cleanup value.

BaP-TE Soil exposures to BaP-TE in sampled properties around the Walter Coke, Inc. site do not present a public health hazard. Fifteen properties have average BaP-TE values above the proposed cleanup value. Adverse health effects are not expected from BaP-TE soil exposures at properties with average BaP-TE concentrations below the proposed cleanup value.

Recommendations

ATSDR makes the following recommendations:

- 1) Because pica exposures at the properties with the highest arsenic concentrations could produce short term health effects, several of the sampled properties with the highest contaminant concentrations should be remediated to decrease arsenic exposures (sixteen residential properties and two school yards have been or are proposed for remediation).
- 2) ATSDR will complete the review of community-based air data to assess exposures to airborne contaminants and evaluate additional community-based soil data as it becomes available.

For More Information

If you have concerns about your health, you should contact your health care provider. For questions or comments related to this Public Health Consultation please call ATSDR at 1-800-CDC-INFO: